

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES & ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER

APPLICATION FOR PERMIT TO CONSTRUCT ACROSS OR ALONG A STREAM
AND / OR WATER QUALITY CERTIFICATION

Chapter 151 of the Kentucky Revised Statutes requires approval from the Division of Water prior to any construction or other activity in or along a stream that could in any way obstruct flood flows or adversely impact water quality. If the project involves work in a stream, such as bank stabilization, dredging or relocation, you will also need to obtain a 401 Water Quality Certification (WQC) from the Division of Water. This completed form will be forwarded to the Water Quality Branch for WQC processing. The project may not start until all necessary approvals are received from the KDOW. For questions concerning the WQC process, contact John Dovak at 502/564-3410.

If the project will disturb more than 1 acre of soil, you will also need to complete the attached Notice of Intent for Storm Water Discharges, and return both forms to the Floodplain management Section of the KDOW. This general permit will require you to create and implement an erosion control plan for the project.

1. OWNER: Synthetic Materials, LLC, Alex Hohne, Vice President

19206

Give name of person(s), company, governmental unit, or other owner of proposed project.

MAILING ADDRESS: 6009 Brownsboro Park Blvd, PO Box 209, Louisville KY 40207

TELEPHONE#: 502-895-2810

EMAIL: ahohne@synmatusa.com

2. AGENT: Same as owner

Give name of person(s) submitting application, if other than owner.

ADDRESS: _____

TELEPHONE#: _____

EMAIL: _____

3. ENGINEER: Philip W. Disney

P.E. NUMBER: 11474

Contact Division of Water if waiver can be granted.

TELEPHONE#: 270-929-2701

EMAIL: pdisney@synmatusa.com

4. DESCRIPTION OF CONSTRUCTION:

Synthetic Materials LLC (SYNMAT) will be constructing a barge loading

Describe the type and purpose of construction and describe stream impact

conveyor system utilizing an existing 30' diameter mooring cell. SYNMAT will install a 50' shuttle conveyor with

A telescopic lowering tube, fed by a 405' transfer conveyor from a truck dump hopper and belt feeder system.

Less than 0.25 acre will be disturbed for the installation of the truck dump hopper into the dike of a sediment

control structure. One additional breasting dolphin will be installed between two existing cells and in line with the

Existing mooring cells. The conveyor will be supported over water on 4 sets of 20" diameter tube piles.

5. COUNTY: Trimble

NEAREST COMMUNITY: Bedford, KY

6. USGS QUAD NAME: Bethlehem F34

LATITUDE/LONGITUDE: 38° 34' 53" Lat / -85° 25' 00"

7. STREAM NAME: Ohio River

WATERSHED SIZE (in acres): 121,230,080

8. LINEAR FEET OF STREAM IMPACTED: 390 ft

9. DIRECTIONS TO SITE:

From Bedford Kentucky drive US42 west 0.5 mile to Kentucky state rt 754, Bare Bone Road.

Turn right onto KY-754 and drive 5.7 mile west to the Trimble County Generating Station of E-ON. The barge loader is

located within the facility grounds and situated directly on the Ohio River directly adjacent to the existing limestone

barge unloading system.

10. IS ANY PORTION OF THE REQUESTED PROJECT NOW COMPLETE? Yes No If yes, identify the completed portion on the drawings you submit and indicate the date activity was completed. DATE: _____
11. ESTIMATED BEGIN CONSTRUCTION DATE: July 2009
12. ESTIMATED END CONSTRUCTION DATE: February 2010
13. HAS PERMIT BEEN RECEIVED FROM THE US ARMY, CORPS OF ENGINEERS? Yes No If yes, attach a copy of that permit.
14. THE APPLICANT **MUST** ADDRESS PUBLIC NOTICE:
- (a) PUBLIC NOTICE HAS BEEN GIVEN FOR THIS PROPOSAL BY THE FOLLOWING MEANS:
____ Public notice in newspaper having greatest circulation in area (provide newspaper clipping or affidavit)
____ Adjacent property owners(s) affidavits (Contact Division of Water for requirements.)
- (b) X I REQUEST WAIVER OF PUBLIC NOTICE BECAUSE:
The US Army Corp of Engineers will issue a public notice as part of their review and permit process.
Contact Division of Water requirements.
15. I HAVE CONTACTED THE FOLLOWING CITY OR COUNTY OFFICIALS CONCERNING THIS PROJECT:
US Army COE - Lee Ann Divine; Trimble County Floodplain Management -
Give name and title of person(s) contacted and provide copy of any approval city or county may have issued.
16. LIST OF ATTACHMENTS: Site Location Map Aerial Photo of Site, Drawings TCP-SP-001 through TCP-SP-006.
List plans, profiles, or other drawings and data submitted. Attach a copy of a 7.5 minute USGS topographic map clearly showing the project location.
17. I, _____ (owner) CERTIFY THAT THE OWNER OWNS OR HAS EASEMENT RIGHTS ON ALL PROPERTY ON WHICH THIS PROJECT WILL BE LOCATED OR ON WHICH RELATED CONSTRUCTION WILL OCCUR (for dams, this includes the area that would be impounded during the design flood).
18. REMARKS: All plans have been reviewed by the owner representatives at the Trimble County Generating Plant.
The Land Use Lease metes and bounds description is attached. E-ON.US

I hereby request approval for construction across or along a stream as described in this application and any accompanying documents. To the best of my knowledge, all of the information provided is true and correct.

SIGNATURE: _____

Owner or Agent sign here. (If signed by Agent, a Power of Attorney should be attached.)

DATE: 2/5/2009

SIGNATURE OF LOCAL FLOODPLAIN COORDINATOR: _____

Permit application will be returned to applicant if not properly endorsed by the local floodplain coordinator.

DATE: 2-13-2009

SUBMIT APPLICATION AND ATTACHMENTS TO:

Floodplain Management Section
Division of Water

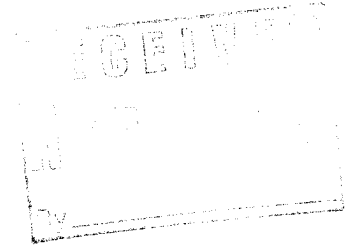
SYNMAT

Synthetic Materials, LLC

Philip Disney, PE
101 E 2nd Street Ste 200
Owensboro, KY 42303
pdisney@synmatusa.com
Phone: 270/929-2701

Friday, February 20, 2009

Mr. Ron Dutta
Floodplain Management Section, DOW
200 Fair Oaks Lane, 4th Floor
Frankfort, KY 40601-1189



Subject: Notice of Plans to Construct New Barge Loading Facility
Reference: Trimble County Generating Station, EON.US

Mr. Dutta,

As described herein, Synthetic Materials is planning installation of a new gypsum barge loading facility at the Trimble County Generating Station of EON.US on the Ohio River near mile marker 572. The proposed facility will include the addition of a conveyor system to load barges at an existing 30' diameter sheet pile mooring cell. The conveyor will be supported on tube piling to the existing cell. One 34" tube dolphin will be installed downstream and in-line with the existing cells. Breasting cables and a horizontal hoisting system will be extended to the dolphin and to an adjacent 30' cell upstream. Your signature is required for the application to be submitted.

A 15' square truck dump hopper will be installed near the roadway leading to the limestone unloading system. The hopper foundation will be constructed in the existing dike facing the river shoreline. This hopper will require the excavation of the dike and the installation of temporary sheet piling during the concrete construction. All excavated soils (approximately 180 cubic yards) will be replaced and compacted to raise the approach elevation from the roadway.

The planned construction of the described facility is scheduled for late summer and autumn of 2009. The facility will be operational by February 2010. If you should have any questions or need further information on this project, please give me a call at 270-929-2701.

Sincerely,

Philip Disney, PE

Attachments: *Application for KY Div of Water Permit to Construct Along a Stream*), Attachment A – Narrative of Construction Activities, Figure 1 – Site Location Map, Figures_2 – Aerial Site Photo, (6) drawings TCP-SP-001/006 Proposed Barge Loader System General Arrangements, Location and Construction.

Trimble County Plant Gypsum Barge Loader 2009

The proposed activities filed for in this application are required for the construction and operation of a barge loading operation on the Ohio River 725 ft north of river mile marker 572. The river front structures are composed of the following:

A. Existing Mooring Cell (Reference drawings TCP-SP-001 & -004 and Site Aerial Photo Map)

An existing 30' diameter sheet pile cell will be utilized to support the conveyor structures and control room. The mooring cell has been inspected above and below the water line for structural integrity. No damage, excessive corrosion or uneven settling conditions were found during the inspection. The cell will not require any significant structural modifications. Breasting cables will be extended to the cell from adjacent 30' diameter cell and a new 34" diameter tube dolphin to control the barges during loading.

B. Conveyors

Three belt conveyors will be utilized to move gypsum from the truck dump hopper to the barge lowering tube. The conveyors will move up to 750 tph of gypsum to the barge.

1. A 42" wide shuttle conveyor x 50' long will be supported on a movable truss frame of heavy mild steel structural angles. The conveyor frame will support a 40' long telescopic lowering tube (see item C. below) at the discharge end of the shuttle conveyor. It will travel 20' horizontally to cantilever out over the barge during loading. Normal stowed position of the shuttle conveyor will be retracted above the 30' mooring cell. (Reference Drawings TCP-SP-001 & -004)
2. A 36" wide transfer conveyor x 405' length will be supported continuously on a truss span constructed of heavy mild steel structural angles, with catwalk along the full length. The truss system will be supported on tube piling (see item E below) over the floodplain and water. (Reference TCP-SP-001 thru 004)
3. A 42" wide feeder conveyor x 12' length will discharge the truck-dump hopper onto the transfer conveyor. (Reference drawings TCP-SP -003) The conveyor will be supported from the steel and concrete hopper structure, which is to be located at the edge of an existing dike (Reference site aerial photo map)

C. Lowering Tube (Reference drawing TCP-SP-004)

An adjustable 36" diameter telescopic lowering tube will contain the gypsum as it is discharged into the barge. The tube will provide enclosure of dust at the transfer point to eliminate particulate emissions for the full range of water levels during normal barge loading op-

erations. The enclosure will also be equipped with a dust collection system to maintain a negative pressure inside the tube at the transfer points (not shown). The enclosed configuration of the lowering tube and the ability to control relocation of the gypsum precisely within the barge will eliminate spillage potential. The gypsum will normally be received at 7% to 10% moisture, which further reduces potential for fugitive dust emissions during loading.

D. Truck Dump Hopper (Reference Drawings TCP -SP-002 & 003 and Aerial Site Photo Map)

A 15' square x 20' high truck dump hopper of 3/8" mild steel plate and angle construction will be installed at the roadway elevation of 472' on the side of the sediment control dike. The hopper will be fully lined and supported by a concrete foundation from 452' elevation. The concrete foundation will require excavation into the western side of the dike embankment. The hopper can contain approximately 50 tons of gypsum storage and will discharge using a 42" belt feeder conveyor. The feeder will provide a steady feed of gypsum to the transfer conveyor. To control fugitive dust emissions at the truck dump, a metal building enclosure will be constructed over the hopper. Excavated materials will be replaced and compacted in 2' lifts on the outside of the concrete support foundation. The remaining excavated materials will be compacted between the truck access road and dump hopper to provide a level and durable sub-base for dense grade aggregate roadway expansion. Approximately 300 cubic yards of soils will be excavated for the installation of the hopper foundation and adjacent retaining structures. All soils will be replaced to raise the level of the hopper approach.

E. Tube Piling Structures (Reference Drawing TCP-SP-001 & -004)

Three sets of 20" tube pilings will be installed to support the overhead transfer conveyor. The pilings will be installed in the river basin, and on the shore side of the existing mooring cells. Access for installing the piles will be along the lower roadway at 447' elevation during low water conditions. The conveyor truss will be supported from structural steel frames at either end.

F. Control Room (Reference Drawing TCP-SP-004)

The 8' x 8' control room will be located within the structural steel on the 30' mooring cell. It will be located just below the shuttle conveyor level and provide the operator with an unobstructed view of the barge loading operation. The control room will house some low voltage control panels, HVAC equipment, communications equipment, lighting and operator controls for all motorized equipment.

G. Barge Cable Hoists (Reference Drawing TCP-SP-006)

Two 10 HP wire rope barge pullers will be positioned on the mooring cell to provide horizontal positioning for the barge during loading. These hoists will work in tandem to insure the barge remains under control for all loading conditions. The hoists will be fitted with braking to automatically hold a barge in the fixed loading location. The operation of the hoists will be

from the control room. Pulling wire ropes will be guided by sheaves, which are to be located on the adjacent mooring cell or dolphin.

H. Dolphin (Reference Drawing TCP-SP-001 & 006)

One 34" diameter tube-dolphin will be located south of the existing barge loader cell as shown in blue on drawing TCP-SP-001. It will be located in alignment with the existing mooring cells to support breasting cables and the operation of the barge hoisting system. The tube dolphin will be braced with two 20" diameter batter piles at right angles. The tube dolphin will be concrete filled and accessible from the existing catwalk. It will provide for barge mooring and movement by supporting breasting cables and sheaves for the rope hoisting operation.

I. Excavation (Reference Drawing TCP-SP-002 & -003)

Approximately 180 cubic yard of soils will be excavated for the installation of the truck dump hopper and foundation. Sheet piling will be installed to control the walls of the excavation and the integrity of the dike during placement of the concrete. All excavated soils will be replaced and compacted following the construction of the concrete foundation and walls. The excess soils will be used to fill between the top of the dike and the hopper at the 471' elevation. No materials will be used as fill below the 100-year flood elevation, 459.66'. 12" of durable graded aggregate will be placed between the fill area and approach slab, which is level with the existing roadway at the 472' elevation.

J. Erosion & Runoff Control (Reference Drawing TCP-SP-002)

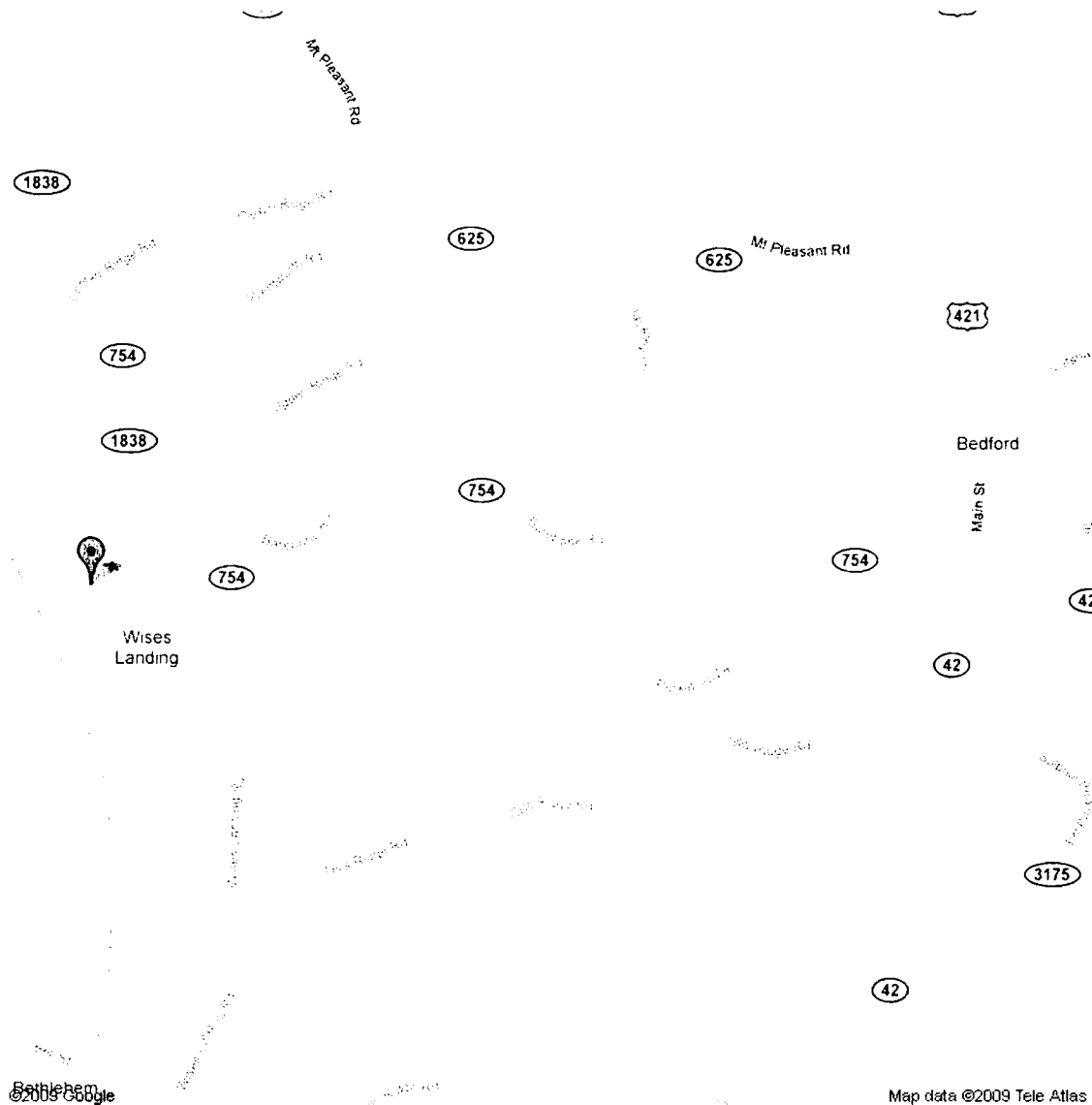
The perched location of the excavation protects the site from rainfall run-off. A combination of silt screen perimeter fencing at the 449' elevation and a gravel diversion berm at the 470' elevation will be used to prevent soil erosion from leaving the site. The total disturbed or affected area will be less than 0.25 acre (excluding conveyor support tube piling). The disturbed area will be stabilized using seed and mulch within 14 days of the completion of the construction activities. All excavated materials will be replaced and compacted. All surplus soils will be placed and compacted above the high water flood elevation 459.66' to create an approach to the dump hopper. The approach will be capped with concrete or durable stone.

K. Utilities (Reference Drawing TCP-SP-005)

Underground electrical service will be brought to the site using existing spare conduits. The 480 volt service will be provided by a new transformer. The underground service will be extended to the conveyor system and supported on the conveyor truss above ground to the barge loading cell. A motor control center for the hoists, conveyors, chute, dust collector and control power will be located at the 30' cell within the control room. An additional high voltage transformer and motor control station will be located near the feeder conveyor, but well above the 100 year flood elevation of 459'.

Google
Maps

Notes Synthetic Materials Barge Loader
Construction Site at Trimble County
Generating Station - Site Location
Access Map 2-3-09 from Bedford KY



SYNMAT Barge Loader at Trimble County Plant

Site Location Map from Bedford KY

0 views - Public

Created on Feb 27 - updated Feb 27

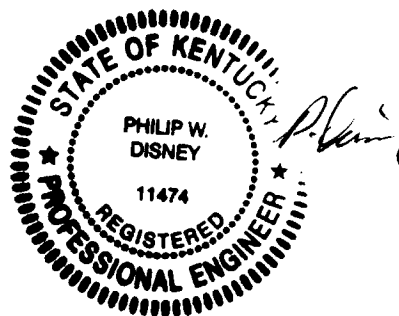
By Google

Map data ©2009 Tele Atlas



Site Map

**Trimble County Generating Plant
Proposed Barge Loading Conveyors
Location**



Site Location Map from Bedford KY

Proposed Truck Dump Hopper

Polymer 835-83A837&NP IN

WOLFE 27011

Streaming 100%

© 2008 Europa Publishing

SPOT IMAGE

Imago IndianaMap Framework Data

© 2008 Toledo Alliance

Streaming 100%

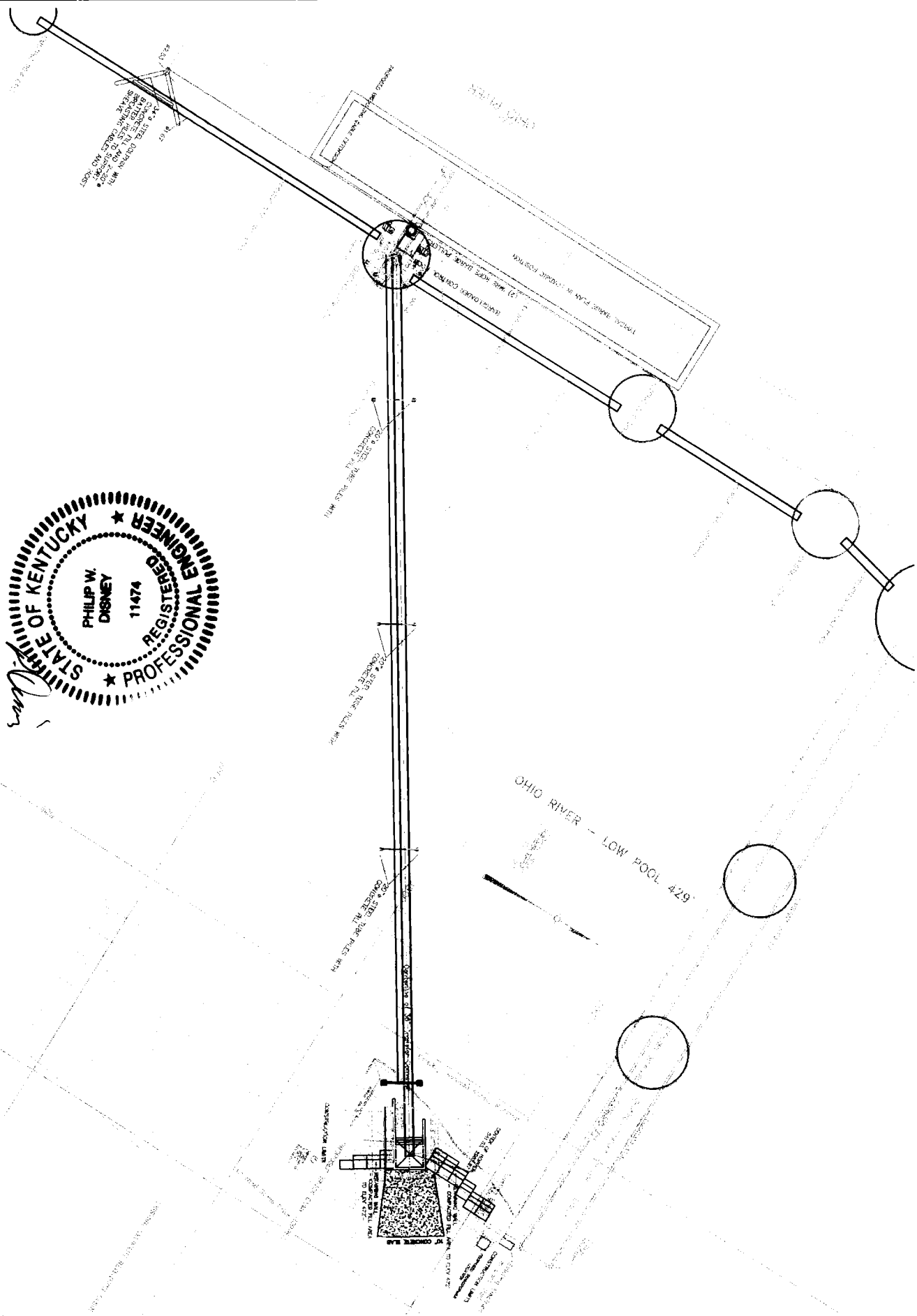
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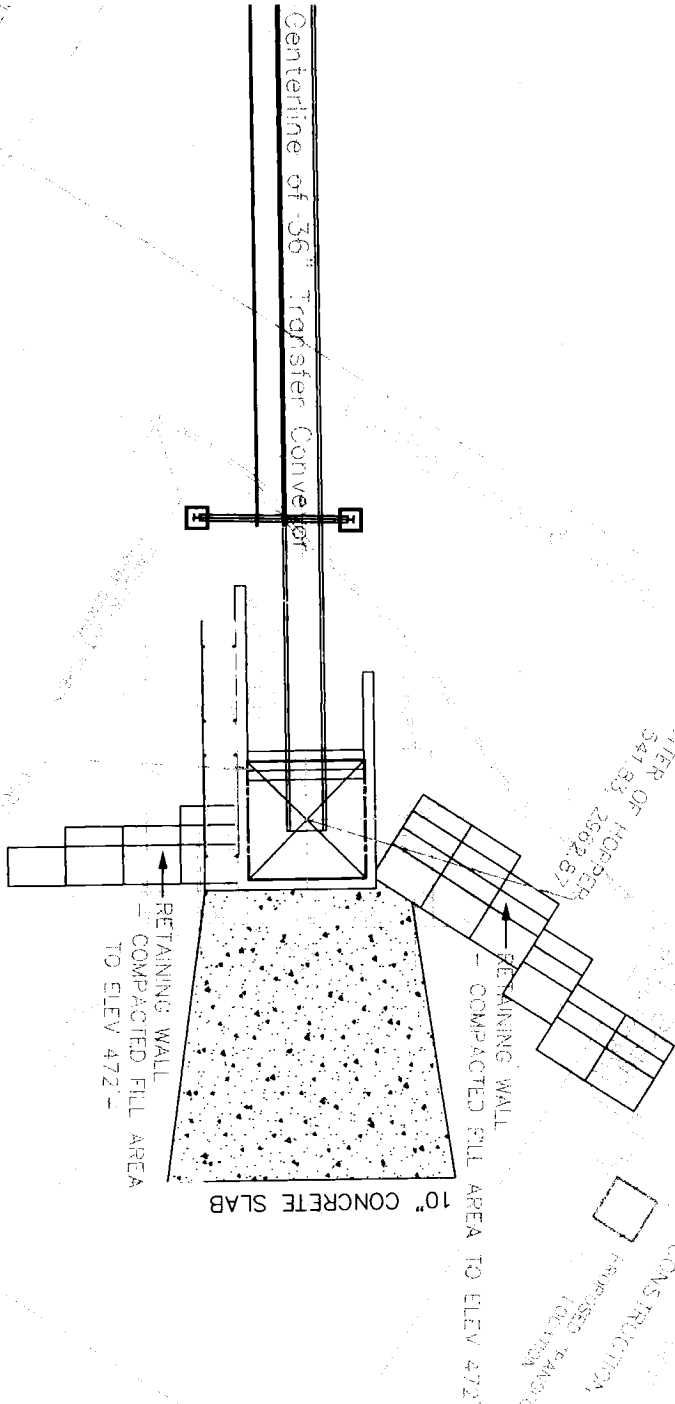
REGISTERED MAIL

P. S. Davis



STATE OF KENTUCKY
 PHILIP W. DISNEY
 11474
 REGISTERED PROFESSIONAL ENGINEER

[illegible]



NOTE:

1. ALL DIMENSIONS ARE APPROXIMATE. EXISTING CONDITIONS MAY VARY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.

2. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.

4. THE CONTRACTOR SHALL MAINTAIN ADEQUATE EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PROCESS.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.

6. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE SYSTEMS THROUGHOUT THE CONSTRUCTION PROCESS.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.

8. THE CONTRACTOR SHALL MAINTAIN ADEQUATE EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PROCESS.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.

10. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.

REV	DATE	DESCRIPTION
0	02/08/2009	HOPPER LOCATION AND EXCAVATION. PLAN ISSUED FOR APPROVAL.

SYNMAI
Synthetic Materials

10" CONCRETE SLAB

RETAINING WALL - COMPACTED FILL AREA TO ELEV 472

RETAINING WALL - COMPACTED FILL AREA TO ELEV 472

CONSTRUCTION LIMITS

Centerline of 36" Transfer Conveyor

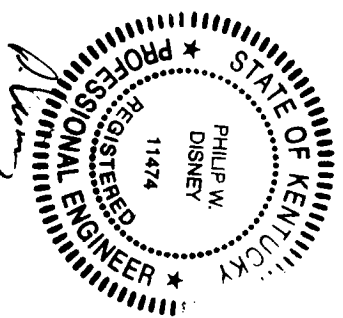
STATE OF KENTUCKY
REGISTERED PROFESSIONAL ENGINEER
PHILIP W. DISNEY
11474

Prepared: Philip W. Disney, P.E.
Checked: Philip W. Disney, P.E.
Date: 02/08/09

Project: LITTLE COUNTY PLANT FOR US
Proposed SYNMAI Bagged Lumber

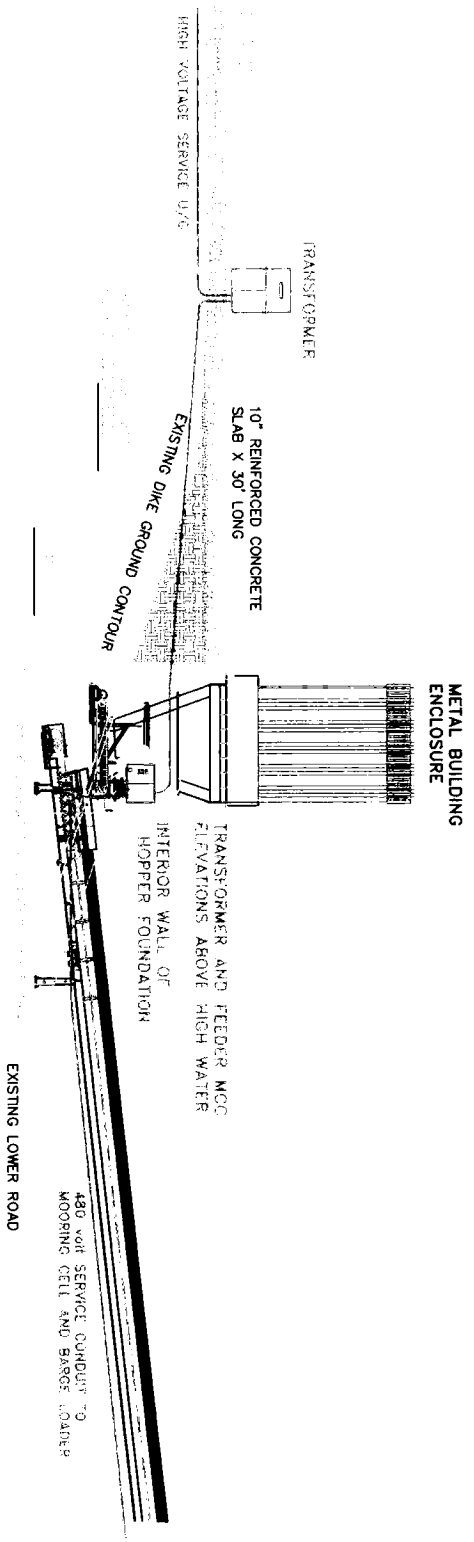
Scale: 1"=20'-0" (TYP) TOP-Sheet 002 of 002

CAD DRAWING No. C:\DRAWINGS\Little County\Berge Lumber Project



EXISTING 30'x MOORING CELL

NOTE		DATE	BY	APPROVED	SYN/MAT Synthetic Materials	DATE	DESCRIPTION
1	1	02/09/2008	LOCATION PLAN ISSUED FOR APPROVAL				
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TRANSFORMER & MCC EQUIPMENT ELEVATIONS - PROPOSED



UTILITY PROTECTION NOTE

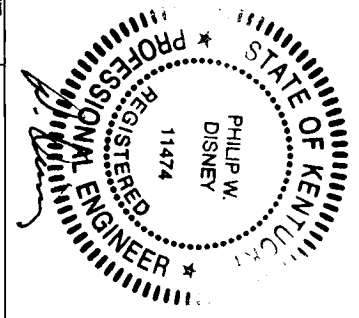
NOTE: THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE PROTECTION OF ALL UTILITIES. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES.

REV	DATE	DESCRIPTION
0	02/06/2009	LOCATION PLAN ISSUED FOR APPROVAL

SYNMAI Synthetic Materials

Trumbull County Plant, LON 1 S
Proposed SYNMAI Barge Loader

Proposed Transformer and Feeder MCC



ORIGINAL GROUND CONTOUR

EXISTING LOWER ROAD

480 volt SERVICE CONDUIT TO
MOORING CELL AND BARGE LOADER

SYNMAI CHANGED NAME - YES NO D

SYNMAI CHANGED NAME - YES NO D

CAD DRAWING NO. C:\DRAWINGS\Trumbull\Barge Loader Project

5.6 0

